IN THE SPECIFICATION:

Please add the following paragraph after the title:

Cross Reference To Related Application

[0001] This application is a ***national stage*** of PCT/EP2004/000185 filed January 14, 2004 and based upon DE 103 08 059.7 filed February 26, 2003 under the International Convention.

Please replace paragraph [0002] with the following amended paragraph:

[0002] The invention relates to a linear displacement system for a base carriage mounted so that it can be displaced freely on a flat floor surface, in particular as part of a motion unit for a driving simulator, ~~according to the precharacterizing clause of claim 1,~~ as is disclosed for example by (unpublished patent application 101 50 382.2-35).

Please replace paragraph [0009] with the following amended paragraph:

~~**[0009]** The object is achieved according to the invention by the features of claim 1.~~

Please replace paragraph [00011] with the following amended paragraph:

[00011] In order to make the displacements and accelerations of the base carriage and the motor carriage smooth, the friction between the carriages and the floor surface must be as low as

possible. Preferably, therefore, the carriages are mounted relative to the floor surface via air bearings and/or air cushions ~~(claims 2 and 3)~~. Such an air bearing allows free displacement of the carriages on the floor surface and is associated with minimal friction forces between the carriages and the floor surface. Air bearings are furthermore distinguished by high stiffness, which constitutes an important prerequisite for unimpeded sliding of the carriages on the floor surface. Alternatively, the base carriage and/or the motor carriage may also be mounted relative to the floor surface via gliding bearings or rocking bearings.

Please replace paragraph [00012] with the following amended paragraph:

[00012] In a preferred embodiment of the invention, the base carriage is joined to the guide frame via not one but two motor carriages, which are arranged mutually offset ~~(claim 4)~~. Two spatially separate, synchronously operated drive units are provided in order to drive the two motor carriages. The stability of the overall system can thereby be increased, so that the risk of tilting is reduced.

Please replace paragraph [00013] with the following amended paragraph:

[00013] An electromagnetic linear drive is preferably used as the drive unit of the linear displacement system ~~(claim 5)~~. Compared to other drives (for example tensioned belt drives),

this drive concept has the advantage of a compact structure. Furthermore, the risk of uncoordinated mechanical vibration excitations of the system is substantially prevented when electromagnetic linear drives are used. Since electromagnetic linear drives do not require any intermediate gearing, they furthermore have particularly low friction.

Please replace paragraph [00014] with the following amended paragraph:

[00014] The electromagnetic linear drive is preferably designed as a synchronous motor ~~(see claim 6)~~. Unlike an asynchronous motor, in which the opposing field in the secondary coils is generated by induction, the opposing field in a synchronous motor is "built-in" in the form of permanent magnets. Synchronous motors have the advantage that the "magnetic air gap" (between the permanent magnets and the primary coils) plays much less of a role than in an asynchronous motor. For comparable forces, synchronous motors can therefore be operated with a significantly larger "magnetic air gap"; furthermore, the dependency of the force on air-gap fluctuations is limited owing to their very principle. This is also advantageous, above all, for controllability during operation and therefore adjustability of the force. Although all these reasons militate in favor of using a synchronous motor, it is nevertheless (in principle) also possible to use asynchronous motors.

Please replace paragraph [00016] with the following amended paragraph:

[00016] In a preferred embodiment, the permanent magnets of the guide frame are in the form of flat panels or ribs arranged successively in the displacement direction (Y) of the linear drive. These panel-like permanent magnets engage in U-shaped primary coils of the motor carriage ~~(claim 7)~~. The series of permanent magnets then spans the entire motion space of the linear displacement system. The inter-engaging permanent magnets/primary coils are preferably oriented vertically, so that the permanent magnets protrude vertically downward from the guide frame. The system is therefore insensitive to relative motions in the vertical (Z) direction between the guide frame and the motor carriage; this furthermore minimizes the bending forces and bending moments which act on the guide frame owing to the weight of the permanent magnets.

Please replace paragraph [00017] with the following amended paragraph:

[00017] In order to guide the motor carriage very accurately relative to the guide frame, and in order to be able to keep the air gap constant between the primary coil of the motor carriage and the permanent magnets of the guide frame, additional air bearings which support and guide the motor carriage relative to the guide frame are expediently provided on the motor carriage ~~(claim 8)~~.

Please replace paragraph [00018] with the following amended paragraph:

[00018] The base carriage is preferably joined to the motor carriage or carriages via a rotary articulation ~~(claim 9)~~. In contrast to rigid coupling between the base carriage in the motor carriage - which would mean overengineering the system - such an articulation allows rotations of the base carriage relative to the motor carriage which may occur due to deformations and floor irregularities.

Please replace paragraph [00019] with the following amended paragraph:

[00019] The rotary articulation which couples the base carriage to the motor carriage is preferably arranged at the height of the center of mass of the base carriage, the carried object and the motor carriage ~~(claim 10)~~. With this type of coupling, the X and Y forces transmitted from the motor carriage to the base carriage are introduced into the base carriage at the height of the center of mass, which minimizes the risk of tilting the base carriage (due to torques about the X or Y axes).

Please replace paragraph [00020] with the following amended paragraph:

[00020] In order to further reduce the risk of tilting the base carriage, it is also preferable for the other side of the base carriage from the motor carriage to be supported relative to the

floor surface. A head support, which is coupled to the base carriage via a rotary articulation and is mounted so that it can be displaced on the floor surface, is used for this purpose ~~(claim 11)~~. The head support may also be supported relative to the base carriage via coupling elements (claim 12).